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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,293	06/26/2003	Akira Kishida	0020-5152P	2904

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BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER

PARSONS, THOMAS H

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/606,293

**Applicant(s)**

KISHIDA, AKIRA

**Examiner**

Thomas H. Parsons

**Art Unit**

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6 and 8 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities:

Page 9, line 24, suggest changing "terminal 7" to --terminals 7,7--;

Page 21, line 2-3, the text "...is a minor changed one of the first..." appears awkwardly worded; and,

line 15, suggest deleting "to".

Appropriate correction is required.

### *Abstract*

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

**The abstract of the instant specification exceeds 150 words. Accordingly, the Examiner suggests amending the abstract, as appropriate, to be within the range of 50 to 150 words.**

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Machida et al. (5,796,588).

**Claim 1:** Machida et al. in Figures 1, 8 and 10 disclose a battery (101) provided with terminals comprising a battery body and terminals (i.e. +, - electrodes) for electrically connecting the battery body to conductive portions (106) provided in a circuit board (103), a portion (102) of each of the terminals being used for a fixing portion for fixing the battery body to the circuit board (col. 6: 41-65)

wherein the fixing portion (102) of each of the terminals comprises at least one engaging portion (102), which engages a through hole formed in the circuit board (103), and a contacting portion (102), which contacts the conductive portion (106) to electrically connect the conductive portion to the battery body, whereby the battery body is fixed in a state of being electrically connected to the conductive portions of the circuit board (abstract, col. 3: 22-28, and col. 4: 60 - col. 7: 24).

**Claim 2:** Machida et al. disclose that the contacting portion (102) and/or the engaging portion (102) have resilient (flexibility) functions, whereby the battery body is fixed in such a state that the circuit board is pressed by the contacting portion and/or the engaging portion (col. 5: 32-48).

**Claim 4:** Machida et al. in Figure 7 disclose that the engaging portion (102) is designed so as to include the contacting portion or portions (102).

5. Claims 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by JP10-064490.

**Claim 5:** JP10-064490 in Figure 1 discloses a battery provided with terminals comprising a battery body (2), and terminals for electrically connecting the battery body to conductive portions (11, 12) provided in a circuit board (1), a portion of at least one terminal being used for a fixing portion (leads 21 and 22) for fixing the battery body to the circuit board (1), wherein the fixing portion of the terminal comprises clamping portions (21, 22) for clamping or sandwiching the circuit board from surfaces of both sides, and the clamping portions are provided with contacting portions (21, 22), which contact the conductive portion of the circuit board to electrically connect the conductive portion to the battery body, whereby the battery body is fixed in a state of being electrically connected to said conductive portions (abstract and paragraphs [0005]-[0012]).

**Claim 6:** JP10-064490 discloses in Figure 1 that at least one clamping portion (21, 22) is provided with an engaging portion (21, 22), which engages a portion where the conductive portion (11, 12) of the circuit board (1) is provided or a portion around the conductive portion when the battery body is mounted on the circuit board.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Machida et al. in view of Yumiba et al. (5,470,678).

**Claim 8:** Machida et al. as applied, argued and disclosed above in claim 1, and incorporated herein.

Machida et al. disclose on col. 5: 6-10 that the battery attached to the PCB may be a rechargeable battery such as a nickel cadmium battery, a nickel metal hydride battery, or lithium ion battery, or it may be a non-rechargeable battery such as a lithium battery but is silent as to metal lithium used for a negative electrode and an organic solvent with high volatility used as an electrolyte solvent.

Yumiba et al. disclose a battery comprising metal lithium used for a negative electrode and an organic solvent with high volatility used as an electrolyte solvent (abstract and col. 1: 24-38).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have substituted the battery with the battery of Yumiba et al. because Yumiba et al. disclose a lithium battery that would have provide a high voltage and a large capacity density thereby improving the life and performance of the cell.

***Allowable Subject Matter***

8. Claim 7 is allowable over the prior art of record.

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9. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Reasons for Indicating Allowable Subject Matter***

10. The following is a statement of reasons for the indication of allowable subject matter:

**Claim 3:** Machida et al. disclose an engaging portion. However, this reference fails to teach or suggest an engaging portion having a locking portion, which is capable of being caught in the through hole of the circuit board or in the vicinity of the through hole as required by claim. Accordingly, the claim is patentably distinct from the prior art of record.

**Claim 7:** The claimed invention is directed towards battery provided with terminals comprising a battery body and terminals for electrically connecting the battery body to conductive portion provided in a circuit board, wherein each of the terminals comprises a contacting portion in contact with a conductive portion of the circuit board to be electrically connected thereto, and each of the contacting portions includes a through hole or a notch, into which a rivet is inserted to make each of the terminals fixed to the circuit board, whereby the battery body is fixed in a state of being electrically connected to the conductive portions of the circuit board.

JP2003-208886 discloses a battery having a metal plate-like lead separately and electrically connected to each of a positive and negative electrode and the circuit board, and the plate-like lead and the circuit board are connected to each other by a rivet. However, because the date of this reference is later than that date of the instant application, the reference does not

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qualify as prior art under 102 or 103. Accordingly, the claim is allowable over the prior art of record.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas H. Parsons whose telephone number is (571) 272-1290. The examiner can normally be reached on M-F (7:00-4:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thomas H Parsons  
Examiner  
Art Unit 1745

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**WILLIAM KRYNSKI**  
**SPECIAL PROGRAM EXAMINER**  
**TECHNOLOGY CENTER 1700**